



Universitas Negeri Surabaya
Fakultas Teknik
Program Studi S1 Teknik Elektro

Kode
Dokumen

RENCANA PEMBELAJARAN SEMESTER

| MATA KULIAH (MK) | KODE | Rumpun MK | BOBOT (sks) | SEMESTER | Tgl Penyusunan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Dasar Sistem Telekomunikasi | 2020102376 | Mata Kuliah Wajib Program Studi | T=0 P=0 ECTS=0 | 3 | 17 April 2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OTORISASI | Pengembang RPS | | Koordinator RMK | Koordinator Program Studi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Dr. Lusia Rakhmawati, S.T., M.T. ; Pradini Puspitaningayu, S.T., M.T., Ph.D. | | Prof. Dr. I Gusti Putu Asto B., M.T. | Dr. Ir. Lusia Rakhmawati, S.T., M.T. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model Pembelajaran | Case Study | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capaian Pembelajaran (CP) | CPL-PRODI yang dibebankan pada MK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPL-5 | Mampu menerapkan pengetahuan matematika, ilmu pengetahuan alam, teknologi informasi, dan keteknikan untuk mendapatkan pemahaman menyeluruh tentang prinsip-prinsip teknik elektro | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPL-9 | Mampu menerapkan metode, keterampilan, dan piranti teknik elektro modern yang diperlukan untuk memecahkan masalah di bidang keteknikan, khususnya memiliki pengetahuan lanjut pada salah satu bidang keahlian Teknik Tenaga Listrik, Telekomunikasi dan Komputasi Cerdas, Teknik Elektronika, dan Teknik Pengaturan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Capaian Pembelajaran Mata Kuliah (CPMK) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPMK - 1 | Mampu menerapkan pengetahuan dasar teknik telekomunikasi untuk mendapatkan pemahaman menyeluruh tentang prinsip-prinsip keteknikan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPMK - 2 | Mampu berkomunikasi secara efektif baik lisan maupun tulisan yang berkenaan dengan topik dasar teknik telekomunikasi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPMK - 3 | Mampu menerapkan metode dan keterampilan dasar teknik telekomunikasi modern yang diperlukan untuk memecahkan masalah di bidang keteknikan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPMK - 4 | Mampu menerapkan teknologi informasi untuk mendapatkan pemahaman menyeluruh tentang prinsip dasar sistem telekomunikasi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPMK - 5 | Mampu memahami kebutuhan akan pembelajaran sepanjang hayat di bidang telekomunikasi yang terkait dengan isu isu kekinian yang relevan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Matrik CPL - CPMK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1" style="margin: auto;"> <thead> <tr> <th>CPMK</th> <th>CPL-5</th> <th>CPL-9</th> </tr> </thead> <tbody> <tr> <td>CPMK-1</td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>CPMK-2</td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>CPMK-3</td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>CPMK-4</td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>CPMK-5</td> <td style="text-align: center;">✓</td> <td style="text-align: center;">✓</td> </tr> </tbody> </table> | | | | | CPMK | CPL-5 | CPL-9 | CPMK-1 | ✓ | | CPMK-2 | | ✓ | CPMK-3 | ✓ | | CPMK-4 | | ✓ | CPMK-5 | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPMK | CPL-5 | CPL-9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPMK-1 | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPMK-2 | | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CPMK-3 | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPMK-4 | | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPMK-5 | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Matrik CPMK pada Kemampuan akhir tiap tahapan belajar (Sub-CPMK) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="margin: auto;"> <thead> <tr> <th rowspan="2">CPMK</th> <th colspan="16">Minggu Ke</th> </tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th> </tr> </thead> <tbody> <tr> <td>CPMK-1</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">✓</td> </tr> <tr> <td>CPMK-2</td> <td style="text-align: center;">✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">✓</td><td></td><td style="text-align: center;">✓</td><td style="text-align: center;">✓</td><td></td><td></td><td></td> </tr> <tr> <td>CPMK-3</td> <td></td><td style="text-align: center;">✓</td><td></td><td style="text-align: center;">✓</td><td style="text-align: center;">✓</td><td style="text-align: center;">✓</td><td></td><td></td><td style="text-align: center;">✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>CPMK-4</td> <td></td><td></td><td style="text-align: center;">✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">✓</td><td></td><td></td><td></td><td></td><td style="text-align: center;">✓</td> </tr> <tr> <td>CPMK-5</td> <td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">✓</td><td></td> </tr> </tbody> </table> | | | | | CPMK | Minggu Ke | | | | | | | | | | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | CPMK-1 | | | | | | | | ✓ | | | | | | | | ✓ | CPMK-2 | ✓ | | | | | | | | | ✓ | | ✓ | ✓ | | | | CPMK-3 | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | | | | | | | | CPMK-4 | | | ✓ | | | | | | | | ✓ | | | | | ✓ | CPMK-5 | | | | | | | ✓ | | | | | | | | ✓ | |
| CPMK | Minggu Ke | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| CPMK-2 | ✓ | | | | | | | | | ✓ | | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPMK-3 | | ✓ | | ✓ | ✓ | ✓ | | | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPMK-4 | | | ✓ | | | | | | | | ✓ | | | | | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CPMK-5 | | | | | | | ✓ | | | | | | | | ✓ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deskripsi Singkat MK | Mahasiswa dapat mendiskusikan konsep dasar telekomunikasi, mengidentifikasi sinyal informasi, membedakan berbagai tipe saluran transmisi dan jaringan telekomunikasi, menentukan spektrum elektromagnetik dan bandwidth dalam era broadband, menjelaskan perbedaan antara transmisi sinyal digital dan analog, menyimpulkan teknik multiplexing, mengkategorikan komunikasi wireless, mengklasifikasikan berbagai standar telekomunikasi, serta menggali perkembangan teknologi telekomunikasi terkini dengan menggunakan case method dalam perkuliahan. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Pustaka | Utama : | <ol style="list-style-type: none"> 1. Simon Haykin. 2001. Communication Systems , 4th edition. New York: John Wiley & Sons 2. Tarmo Anttalainen. 2003. Introduction to telecommunications network engineering . 2nd edition . Norwood : Artech House telecommunications library 3. Freeman, Roger L., Fundamentals of Telecommunication, 2nd ed., John Wiley & Sons, Inc., NJ, USA, 2005 | | | | | |
|----------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| | Pendukung : | <ol style="list-style-type: none"> 1. Martin Sauter. 2006. Communication Systems for the Mobile Information Society. John Wiley & Sons 2. M.R. Karim . 2002. W-CDMA and cdma2000 for 3G Mobile Network . McGraw-Hil | | | | | |
| | Dosen Pengampu | Dr. Nurhayati, S.T., M.T. Dr. Ir. Lusia Rakhmawati, S.T., M.T. Pradini Puspitaningayu, S.T., M.T., Ph.D. | | | | | |
| Mg Ke- | Kemampuan akhir tiap tahapan belajar (Sub-CPMK) | Penilaian | | Bentuk Pembelajaran, Metode Pembelajaran, Penugasan Mahasiswa, [Estimasi Waktu] | | Materi Pembelajaran [Pustaka] | Bobot Penilaian (%) |
| | | Indikator | Kriteria & Bentuk | Luring (offline) | Daring (online) | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| 1 | Mengerti bagaimana proses telekomunikasi dilakukan, perkembangan teknologi telekomunikasi, dan standar telekomunikasi. | 1. Menjelaskan pengertian telekomunikasi 2. Menjelaskan sejarah perkembangan telekomunikasi 3. Menjelaskan konsep komunikasi simplex, half-duplex, full-duplex | Kriteria: Dapat mengajukan pertanyaan dan menjawab pokok-pokok materi Bentuk Penilaian : Aktifitas Partisipasif | presentasi, diskusi 2 X 50 | | Materi: Materi pertemuan 1 Pustaka: <i>Simon Haykin. 2001. Communication Systems , 4th edition. New York: John Wiley & Sons</i> | 2% |
| 2 | Memahami ciri-ciri sinyal dan bagaimana representasinya terhadap informasi (suara, gambar, video, teks) | 1. Menggambarkan Dasar Jaringan telekomunikasi 2. Menunjukkan Operasi telepon konvensional 3. Menunjukkan Signalling ke sentral dari telepon 4. Menggambarkan Penomoran Telepon 5. Mendemonstrasikan Switching dan Signalling | Kriteria: Dapat mengajukan pertanyaan dan menjawab pokok-pokok materi Bentuk Penilaian : Aktifitas Partisipasif | presentasi, diskusi 2 X 50 | | Materi: Materi pertemuan 2 Pustaka: <i>Tarmo Anttalainen. 2003. Introduction to telecommunications network engineering . 2nd edition . Norwood : Artech House telecommunications library</i> | 2% |
| 3 | Memahami proses transmisi dan modulasi analog | 1. Menjelaskan proses transmisi dan modulasi analog 2. Mendemonstrasikan aspek matematis pada modulasi analog | Kriteria: Dapat mengajukan pertanyaan dan menjawab pokok-pokok materi Bentuk Penilaian : Aktifitas Partisipasif | presentasi, diskusi 2 X 50 | | Materi: Materi pertemuan 3 Pustaka: <i>Martin Sauter. 2006. Communication Systems for the Mobile Information Society. John Wiley & Sons</i> | 2% |
| 4 | Memahami proses transmisi dan modulasi digital | 1. Menjelaskan proses transmisi dan modulasi digital 2. Mendeskripsikan perbandingan dengan modulasi analog | Kriteria: Dapat mengajukan pertanyaan dan menjawab pokok-pokok materi Bentuk Penilaian : Aktifitas Partisipasif | presentasi, diskusi 2 X 50 | | Materi: Materi pertemuan 4 Pustaka: <i>Tarmo Anttalainen. 2003. Introduction to telecommunications network engineering . 2nd edition . Norwood : Artech House telecommunications library</i> | 2% |
| 5 | Mengetahui konsep transmisi digital dan konversi sinyal analog ke digital | 1. Menjelaskan perbedaan transmisi digital dan analog 2. Menjelaskan prinsip dasar PCM (sampling, quantizing, encoding) | Kriteria: Dapat mengajukan pertanyaan dan menjawab pokok-pokok materi Bentuk Penilaian : Aktifitas Partisipasif | presentasi, diskusi 2 X 50 | | Materi: Materi pertemuan 5 Pustaka: <i>Martin Sauter. 2006. Communication Systems for the Mobile Information Society. John Wiley & Sons</i> | 2% |

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|----|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 6 | Memahami konsep dasar jaringan komunikasi dan topologinya | 1. Menjelaskan jaringan komunikasi lokal 2. Menjelaskan topologi LAN 3. Menjelaskan jaringan MAN, WAN | Kriteria: Dapat mengajukan pertanyaan dan menjawab pokok-pokok materi Bentuk Penilaian : Aktifitas Partisipasif | presentasi, diskusi 2 X 50 | | Materi: Materi pertemuan 6 Pustaka: <i>Tarmo Anttalainen. 2003. Introduction to telecommunications network engineering . 2nd edition . Norwood : Artech House telecommunications library</i> | 2% |
| 7 | Mengetahui jenis-jenis media transmisi telekomunikasi | 1. Menunjukkan kabel tembaga 2. Menunjukkan kabel koaksial 3. Menunjukkan transmisi radio 4. Menunjukkan transmisi satelit | Kriteria: Rubrik Evaluasi Bentuk Penilaian : Aktifitas Partisipasif | Case method 2 X 50 | | Materi: Materi pertemuan 7 Pustaka: <i>Simon Haykin. 2001. Communication Systems , 4th edition. New York: John Wiley & Sons</i> | 6% |
| 8 | Menyelesaikan Ujian Tengah Semester | Rubrik Evaluasi | Kriteria: Nilai penuh diperoleh apabila mengerjakan semua soal dengan benar Bentuk Penilaian : Tes | UTS 2 X 50 | | Materi: Materi pertemuan 1-7 Pustaka: <i>Simon Haykin. 2001. Communication Systems , 4th edition. New York: John Wiley & Sons</i> | 20% |
| 9 | Mengetahui gangguan-gangguan dalam transmisi dan konsep quality of service | Siswa dapat mensimulasi, mempresentasi dan mendiskusikan materi terkait | Kriteria: Dapat mengajukan pertanyaan dan menjawab pokok-pokok materi Bentuk Penilaian : Aktifitas Partisipasif | presentasi, diskusi 2 X 50 | | Materi: Materi pertemuan 1 Pustaka: <i>Tarmo Anttalainen. 2003. Introduction to telecommunications network engineering . 2nd edition . Norwood : Artech House telecommunications library</i> | 2% |
| 10 | Memahami perhitungan rugi-rugi transmisi, konsep penguatan dalam jaringan telekomunikasi, dan konsep rasio sinyal terhadap noise. | Siswa dapat mensimulasi, mempresentasi dan mendiskusikan materi terkait | Kriteria: Nilai penuh diperoleh apabila mengerjakan semua soal dengan benar Bentuk Penilaian : Aktifitas Partisipasif | presentasi, diskusi 2 X 50 | | Materi: Materi pertemuan 10 Pustaka: <i>Martin Sauter. 2006. Communication Systems for the Mobile Information Society. John Wiley & Sons</i> | 2% |
| 11 | Memahami konsep multiplexing: FDM, TDM, WDM. | 1. Menjelaskan proses penggabungan dan pemisahan sinyal, 2. Menjelaskan konsep pembagian bandwidth, kecepatan, dan waktu sampling | Kriteria: Nilai penuh diperoleh apabila mengerjakan semua soal dengan benar Bentuk Penilaian : Aktifitas Partisipasif | Case method 2 X 50 | | Materi: Materi pertemuan 11 Pustaka: <i>Martin Sauter. 2006. Communication Systems for the Mobile Information Society. John Wiley & Sons</i> | 6% |
| 12 | Mengetahui cara kerja jaringan telepon, switching, teknik penomoran dan perutean. | Menjelaskan topologi jaringan sentral, switching, teknik penomoran dan perutean. | Kriteria: Nilai penuh diperoleh apabila mengerjakan semua soal dengan benar Bentuk Penilaian : Aktifitas Partisipasif | Case method 2 X 50 | | Materi: Materi pertemuan 12 Pustaka: <i>Simon Haykin. 2001. Communication Systems , 4th edition. New York: John Wiley & Sons</i> | 6% |
| 13 | Mengetahui konsep dasar komunikasi seluler | Menjelaskan konsep dasar komunikasi seluler | Kriteria: Tepat dalam membuat resume dan menjawab dalam diskusi Bentuk Penilaian : Aktifitas Partisipasif | Case method 2 X 50 | | Materi: Materi pertemuan 13 Pustaka: <i>Simon Haykin. 2001. Communication Systems , 4th edition. New York: John Wiley & Sons</i> | 6% |

| | | | | | | | |
|----|--------------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 14 | Mengetahui konsep dasar komunikasi satelit | Menjelaskan konsep dasar komunikasi satelit | Kriteria: Tepat dalam membuat resume dan menjawab dalam diskusi Bentuk Penilaian : Aktifitas Partisipasif | Case method 2 X 50 | | Materi: Materi pertemuan 14 Pustaka: <i>M.R. Karim . 2002. W-CDMA and cdma2000 for 3G Mobile Network . McGraw-Hil</i> | 6% |
| 15 | Mengetahui konsep dasar komunikasi data dan fungsi layer OSI | Menjelaskan konsep dasar komunikasi data dan fungsi layer OSI | Kriteria: Tepat dalam membuat resume dan menjawab dalam diskusi Bentuk Penilaian : Aktifitas Partisipasif | Case method 2 X 50 | | Materi: Materi pertemuan 15 Pustaka: <i>Martin Sauter. 2006. Communication Systems for the Mobile Information Society. John Wiley & Sons</i> | 6% |
| 16 | Menyelesaikan Ujian Akhir Semester | Nilai penuh diperoleh apabila mengerjakan semua soal dengan benar | Kriteria: Nilai penuh diperoleh apabila mengerjakan semua soal dengan benar Bentuk Penilaian : Tes | UAS 2 x 50 | | Materi: Materi pertemuan 1-15 Pustaka: <i>Simon Haykin. 2001. Communication Systems , 4th edition. New York: John Wiley & Sons</i> | 28% |

Rekap Persentase Evaluasi : Case Study

| No | Evaluasi | Persentase |
|----|------------------------|------------|
| 1. | Aktifitas Partisipasif | 52% |
| 2. | Tes | 48% |
| | | 100% |

Catatan

- Capaian Pembelajaran Lulusan Prodi (CPL - Prodi)** adalah kemampuan yang dimiliki oleh setiap lulusan prodi yang merupakan internalisasi dari sikap, penguasaan pengetahuan dan ketrampilan sesuai dengan jenjang prodinya yang diperoleh melalui proses pembelajaran.
- CPL yang dibebankan pada mata kuliah** adalah beberapa capaian pembelajaran lulusan program studi (CPL-Prodi) yang digunakan untuk pembentukan/pengembangan sebuah mata kuliah yang terdiri dari aspek sikap, ketrampilan umum, ketrampilan khusus dan pengetahuan.
- CP Mata kuliah (CPMK)** adalah kemampuan yang dijabarkan secara spesifik dari CPL yang dibebankan pada mata kuliah, dan bersifat spesifik terhadap bahan kajian atau materi pembelajaran mata kuliah tersebut.
- Sub-CPMK Mata kuliah (Sub-CPMK)** adalah kemampuan yang dijabarkan secara spesifik dari CPMK yang dapat diukur atau diamati dan merupakan kemampuan akhir yang direncanakan pada tiap tahap pembelajaran, dan bersifat spesifik terhadap materi pembelajaran mata kuliah tersebut.
- Indikator penilaian** kemampuan dalam proses maupun hasil belajar mahasiswa adalah pernyataan spesifik dan terukur yang mengidentifikasi kemampuan atau kinerja hasil belajar mahasiswa yang disertai bukti-bukti.
- Kreteria Penilaian** adalah patokan yang digunakan sebagai ukuran atau tolok ukur ketercapaian pembelajaran dalam penilaian berdasarkan indikator-indikator yang telah ditetapkan. Kreteria penilaian merupakan pedoman bagi penilai agar penilaian konsisten dan tidak bias. Kreteria dapat berupa kuantitatif ataupun kualitatif.
- Bentuk penilaian:** tes dan non-tes.
- Bentuk pembelajaran:** Kuliah, Responsi, Tutorial, Seminar atau yang setara, Praktikum, Praktik Studio, Praktik Bengkel, Praktik Lapangan, Penelitian, Pengabdian Kepada Masyarakat dan/atau bentuk pembelajaran lain yang setara.
- Metode Pembelajaran:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, dan metode lainnya yg setara.
- Materi Pembelajaran** adalah rincian atau uraian dari bahan kajian yg dapat disajikan dalam bentuk beberapa pokok dan sub-pokok bahasan.
- Bobot penilaian** adalah prosentasi penilaian terhadap setiap pencapaian sub-CPMK yang besarnya proposional dengan tingkat kesulitan pencapaian sub-CPMK tsb., dan totalnya 100%.
- TM= Tatap Muka, PT=Penugasan terstruktur, BM=Belajar mandiri.

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Koordinator Program Studi S1
Teknik Elektro



Dr. Ir. Lusia Rakhmawati, S.T.,
M.T.
NIDN 0012108004

UPM Program Studi S1 Teknik
Elektro



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